



W4WNT	Bill Turner	President
W4JG	Jack Guion	Vice-Pres.
W4NZC	Ken Cannaday	Sec.-Treas.
K4MD	Joe Simpkins	Sysop
-	Lloyd Burt	Webmaster
K8YC	John Scott	Editor

The Pileup

Newsletter of the CDXA

Presidential Ponderings

As this issue of the Pileup goes to press, our VHF gang are up on a mountain near Boone, NC, racking up contacts in the VHF contest. Conditions seem to be favoring great results, so we'll look forward to hearing from Paul, AA4ZZ after the contest is over.

Speaking of Contests, the most recent issue of CQ has the results of CQWW contest. I found lots of CDXA members listed as well as CDXA listed in the club competition. Thanks to the members who submitted their scores under CDXA. I hope we'll see these folks listed again in the fall contest season.

The most recent issue of CQ Contest was the last printed one. Subscriptions were reported to be inadequate to support this

magazine. The editors reported there is some chance that an on-line version may be created to carry on the publication.

Thanks to Claude Oakes, NC4NC, who set up the DX Dinner on Saturday night at the Shelby Hamfest. We had about 14 folks turn up, including the ARRL group and the K5K crew who were at the hamfest. There were some good discussions among the attendees and I hope that we try this again next year.

Our October event will be the Barbecue at Frank Dowd's on Lester Davis Road in Waxhaw, NC on October 20th. More details coming next month along with directions to Frank's place. This event is always popular with members and spouses, so we're all looking forward to it. Thanks again to Frank for offering his front yard to this great get together.

73, Bill

CDXA PacketCluster & Other Communication Systems		
W4DXA Young Mountain (or DXY)	144.93 MHz (1200 bits/second)	441.00 MHz (9600 bits/second)
K4MD Charlotte, NC	144.91 MHz (1200 bits/second)	441.075 MHz (9600 bits/second)
Digipeater near Wingate, NC	144.91 MHz (DXWIN)	
CDXA Repeater 147.18 MHz (+600)	W4DXA, Near Fort Mill, SC	
World Wide Web Homepage	www.cdxa.org	
Wednesday Luncheon (11:30 AM)	Shoney's, 355 Woodlawn Road, Charlotte, NC (704-525-4395)	

Radiotelegraphy Reference Free via the Web

The third edition of *The Art & Skill of Radio-Telegraphy* by Bill Pierpont, N0HFF, is available free for the downloading from the Web (<http://www.qsl.net/n9bor/n0hff.htm>) in Word and in Adobe Portable Document Format. This edition of the definitive international Morse code reference is aimed at those interested in telegraphy, those wanting to learn it or to improve their skills or those who just plain love it. New material includes interviews with such well-known amateurs as former ARRL Communications Manager George Hart, W1NJM--the founder of the National Traffic System and still an active participant. There's also a special section by First-Class Operators Club member Jim Farrior, W4FOK, author of the well-known code practice program--The Mill.

--Fred Adsit, NY2V

DXCC 2001 Yearbook Deadline Approaching

The deadline to submit material for the 2001 DXCC Yearbook is rapidly approaching. Submittals for inclusion in the 2001 Yearbook cover the dates October 1, 2000, through September 30, 2001. Honor Roll applications and updates must be received by the DXCC Desk at ARRL Headquarters no later than Monday, October 1, 2001. Those eligible for complimentary copies of the 2001 DXCC Yearbook must be ARRL members, be current on the DXCC Honor Roll (325 current entities) or, if not on the Honor Roll, submit an application that's received at the DXCC Desk no later than October 1, 2001. Send submittals to DXCC Yearbook, 225 Main St, Newington CT 06111. The 2001 DXCC Yearbook will be out next spring. Copies will be available for \$5

(including mailing). Previous editions from 1993 until 2000 also are available for \$5 each. --Bill Moore, NC1L

(Reprinted from The ARRL Letter, a weekly newsletter distributed by The American Radio Relay League.)

I Solemnly Promise.....

By John Scott, K8YC

After suffering some recent frustrations at the operating practices encountered in trying to get a few "new ones", if I ever end up on the other end of a pileup while on a DXpedition or otherwise, I promise that:

- I will only work a split with a maximum 5 kHz range to use as small a piece of spectrum as possible to accomplish QSOs and minimize annoyance to other Amateur operators.
- I will identify my callsign no less often than every other exchange.
- I will provide QSL information no less often than every four exchanges.

If I find it necessary to work "by the numbers", I also promise:

- I will work only a moderate number of QSOs for each number--say 10 to 15--and move on to the next number when the count is reached.
- I will not recognize "breakers" who call even when the number I am working is not in their callsign.
- I will work all the numbers, zero to nine, before going QRT no matter how tired I am.
- I will insist on defining a "number" for a caller as only being the one in the callsign--not a portable suffix.
- I will start working numbers from the end or middle of the range as needed so the "eights", "nines", and "zeros" are not always the last to be worked.
- I will run a full sequence of numbers before "splitting" regardless of how tough the going is.
- I will run a full sequence of numbers, by continent or worldwide, before calling for "all callers, all numbers" or any other mode which changes a logical progression.

Impossible, you say? Maybe. But I'll bet there will be a few out in the hinterlands who will appreciate that I'm trying to make things right for the majority.

The Pileup

Official Newsletter of the Carolina DX Association
© Copyright 2001

Published monthly 10 times per year, excluding the months of June and December.

The purpose of the association is to secure for the members the pleasures and benefits of the association of persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to "The Amateur's Code" as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the association, but said interest is not a requirement of membership.

Dues are \$30 per year for those using the PacketCluster maintained by the Association, \$15 otherwise, payable each January. Dues are payable by check to the Secretary/Treasurer:

Ken Cannaday, W4NZC
1929 Ewing Avenue
Charlotte, NC 28203

Secret of 279A Revealed

By Bob Southworth, KI4YV

(At the conclusion of the article on the 279A tube, shown with Gary Dixon's picture, last month, your editor suggested Bob Southworth, KI4YV, might know something about the tube. Bob's communication follows.)

Saw the article in pileup concerning the 279A tube and thought that I might shed some light on the unit. I am not sure about any naval radio transmitters using this tube, but there was a Signal Corps designed transmitter built by Federal Electric Company that employed two 279A as finals in push pull class C operation.

As my feeble mind recalls this transmitter had an output of either 2kw or 3kw. The units that I am familiar with were in our SOPAC Message Center. Two were in operation daily relaying messages stateside and with CEN-PAC. The other was a spare. John, I may have told you the story about the time we had two units down and the message center had to keep a stateside schedule. One of the units was repaired except for the modulation transformer which had just arrived. The message center just wanted it for CW operation and ordered it on the air any way we could do it. So we blocked over all the safety interlocks since we had all the doors and covers off of the unit, and plugged it up for use. We fired the unit up, and the message center started sending messages. Those old 279A blink a blue light when conducting. We kept a cat in the transmitter hut to keep the mice population in check. This old cat saw all this flashing going on, and I guess thought this would be a fun game and jumped right in the final output coil. There was a blinding flash, the smell of burned cat fur, and one very dead, naked cat. It blew a hole through the head of the cat and produced not a drop of blood. The end result was the total replacement of the drive and final sections of the transmitter. While we were ordered to energize the unit by the Chief Communication Officer, you know who caught the chew out for operating this unit without the covers on and the doors closed and secured!

As for this unit being on a battle ship, I have never seen one on the battleships I visited, but midnight requisition was a fine art during WW2, and one could have been liberated from the Signal Corp. But that is a whole different story. The tube is for real and was used in

WW2. Right off hand, I do not remember the Signal Corp number for this tube.

(“The Wackiest Ship in the Army”, a 1960's television show was about a sailboat in the South Pacific which was disguised as a native sailing vessel yet performing military intelligence duties. Bob Southworth served as a communications specialist on such a vessel, operated by the Office of Strategic Services, disguised as a deaf, mute native seaman. Just another one of our “Greatest Generation” quietly performing his duty for our country. Ask him about it. —The Editor)

More Vacuum Tube Talk

(This note from Dave Kennedy, N4SU, came to me via e-mail shortly after the last issue of the PILEUP was issued. —Editor.)

John, the latest issue of the Pileup reminded me that I have been procrastinating long enough in saying-- Congrats on the great job you are doing with The Pileup via E-Mail!

I especially enjoyed the tale about the Amperex 279A tube from the WW2 sunken battleship. I still have a monster Eimac tube about that size in a box somewhere, can't remember the type number. 750TH? Am not very active lately but still using three WW2 vintage homebrew amps, PP Eimac 304TLs on 160 and 80 and a single 304TL on 40, 100% CW unless a "new one" shows up on Phone (SSB that is). The 304TL was used as a radar pulse tube in the very first radars during my days in the 12th USAF in North Africa and Italy during WW2.

Also enjoyed the One Thousand Marbles story. The problem here is—I ran out of marbles about eight years ago!

Keep it going OM, 73, Dave, N4SU

(If you go back and look at last month's PILEUP you'll find Dave is the one and the same fellow who's right up there on the worldwide “Top Band” list at number 8. Dave tells me he loves a good ragchew using CW. Seems like love for CW started for many with a stint working for Uncle Sam in WW2. —Editor.)

SPECIAL EVENT STATION – DISCOVERY PLACE SCIENCE MUSEUM

**Celebrating the 20th anniversary of Discovery
Place in Charlotte, NC**

When:

Saturday, October 13, 2001 1400z (1000 EDT)
to
Sunday, October 14, 2001 2000z (1600 EDT)

On October 13 & 14 we will be hosting a special event station from the amateur radio room at Discovery Place. This is one of the finest science museums in the country and the station has been an excellent advertisement for our hobby. QSL's will be by certificate or card, both designed especially for the event. We could use your help as we need operators who are at home behind a microphone and who are used to working pile-ups. Please volunteer, Discovery Place could use your experience for a two hour shift.

Contact me by phone (answering machine) or email. Leave your name, interests, phone number, and the best time to get back with you. Or, see me at the Wednesday luncheon.

Thanks, Paul Ponak (AD4IE)
Phone: 704-332-1882
email: ad4ie@w4bfb.org

Southworth Steps Down as Radio Room Manager at Discovery Place

After serving Discovery Place as its Amateur Radio Station manager for over 10 years, Bob Southworth, KI4YV, has finally decided to pass the baton to his successor. Bob got started with designing the radio room at Discovery Place before groundbreaking for the new addition housing it and the IMAX auditorium even took place. Under Bob's direction, many programs exploring the value of Ham Radio for students visiting Discovery Place have been developed. Surveys of school visits to Discovery Place always place the radio room as one of the top attractions.

In the past year, Bob has been instrumental in adding computer controlled Pegasus radios and PSK31 capabilities to the station to ensure it reflects current technology.

Need P2, Anyone???

Andy Masters, NU5O, is an old friend of mine. He is an air traffic controller, who lives in Memphis. He has participated in mission trips from his church on several occasions, and this time will be serving in Papua New Guinea. I thought you might enjoy posting this information in the Pileup. –Joe, K4MD

From: Andy & Carolyn Masters
Sent: Tuesday, August 28, 2001 10:40 PM

Attached is a conversion table for time in PNG and a summary of our best shots for skeds: I will operate on the following frequencies: 1823.5 CW from 0900 to 0945 beginning Sept 9 through 16. I may miss a few days for meetings and such. 3523 CW from 0945 to 1015 or 1030. 7013 CW from 1030 to 1130. 14.236.5 or 14.226.5 (Southern cross net) from 1200-1230. If we can connect, will attempt any other frequency/mode you suggest. In the send list above is our email address abroad: nu5o@yahoo.com Note lower case letters. Our basic itinerary is to leave Memphis WED SEP 05, arrive Lae,PNG on Friday SEP 07 (their time) and return to Memphis on Friday SEP 21 in the AM. Keep us in your prayers.
Thanks, Andy Masters

Welcome New Members

Please join me in welcoming the following new members to the Carolina DX Association. Your editor believes he's performed a thorough job of picking the new members from the renewals, but I offer apologies if I've ascribed new member status to one who's been with us a while. Names in callsign order:

K4CDX	Steve Peterson	Boone, NC
K4CL	Larry Belcher	Kingsport, TN
KF4NEF	"Rob" Robertson	Trinity, NC
NC4RB	Richard Brinkley	Thomasville, NC
WA4MWX	Dick Talbert	Concord, NC
WB4LMI	Herman Burney	Winston-Salem, NC

Goldthorpe Roves in July

Ted and Itice Goldthorpe report a claimed score for the July CQ VHF contest of 85,008 points with 483 Q's and 176 multipliers. He took first place in that division last year with 28,634 points. Nice hunting, Ted and Itice.

DXCC Chase

Lots of awards are available in Amateur Radio. Indeed, this publication has tried to recognize some of them in past issues by highlighting member accomplishments for WAZ, WAZ by band, “Best of Top Band”, and the like.

Working for awards such as WAZ and DXCC is a personal activity. The award measures attainment with no aspect of time to color the meaning of the goal. Contesting does provide an aspect of time—get as many entities and QSOs in as short a time as possible. Yet, the date which an award is earned, manifested by a certificate number, suggests a notion of time. Am I awed by someone with a low certificate number for a major award? If I have some firsthand knowledge of the difficulty of the same quest, you bet I am. Does it diminish in any way my enjoyment of today’s chase as I know it? No. But today’s chase differs somewhat from that of earlier years.

After almost 17 years as a ham, I arrived in Charlotte in 1995 with 18 DXCC entities as I began volunteering as an operator at Discovery Place. Then I found out about this thing called a PacketCluster. Up until then, I’d get on the air, tune up and down the bands, and maybe I’d work some DX. What a revelation to find that I had 500 pairs of ears in the southeastern US listening for me on the cluster, and they’d tell me what bands were open, what stations were on, and where I would find them. I joined the CDXA to continue the taste of DX via Cluster.

What was it like for one of our very own, Dave Kennedy (N4SU), who sat at the top of the honor roll with 306 entities in January, 1964? The first thing Dave will tell you is that the rules of operating in those days were “Listen, Listen, and Listen” in that order. I’m also sure that receiver stability and noise figures in 1964 made listening a little tougher. By comparison, chasing DX today is akin to shooting fish in a barrel. Today we have better equipment and spotting networks. And, we have more fishermen shooting “big guns” into the barrel. The thrill of the chase is still there even if the context is somewhat different for today’s participants. And, newer hams will never “know it like it was”. Regrettably, with one of the tenets of amateur radio being to foster international goodwill, our failure to do a little ragchewing while chasing DX may be moving us in the wrong direction.

Please view this reporting of DX attainment as a way to develop a little intraclub recognition. Don’t think of it as a competition. I’d like to see each member report all awards on our website, perhaps as a link off of your roster name. Let me know what you think.

Callsign	Name	Active Entities
AA4S	Ron Bailey	333
AA4V	Steve Reichlyn	333
K4MQG	Gary Dixon	333
N4MM	John Kanode	333
N4XO	David A. Rawley	333
AK4N	Grady Robinson	332
K4BVQ	Frank Dowd	332
K4CEB	Larry Sossoman	332
K4HJE	E.V. Hicks	332
K4MD	Joe Simpkins	332
N4UH	Henry Elwell	332
W1WW	George Felber	332
W4CZU	Bud Brown	332
W4MBD	Bob McNeill II	332
W4UNP	Bill Jennings	332
W4WMQ	Murphy Ratterree	332
AA4R	Bill Parris	331
N4AH	Orville Brandon	331
W4ZV	Bill Tippet	331
WA4AFE	Royce Goodwin	331
K4DJ	Richard Moser	330
K4SI	Bob Cranford	330
N4JJ	Jack Jackson	330
N4SU	David Kennedy	330
W4MPY	Wayne Carroll	330
W4UW	Richard Genaille	330
W4VHF	Ted Goldthorpe	330
KZ2I	Steve Sullivan	329
WA8WV	Dave Ellis	329
N4ZY	James H. Brown	328
N4AA	Carl Smith	327
K4ZO	Bruce Gragg	326
N4ZC	Roger Burt	325
WA4PLR	Pete Eldridge	323
K4ZA	Don Daso	322
WA4OBO	Ken Winston	322
K4QVK	Arlin Wilson	321
N4PQX	Bob Burton	321
K4MK	Kent Miller	320
K4DXA	Ken Boyd	306
WA4DOU	Roy Lincoln	250
K8YC	John Scott	205

Awards Noted

We've had a few noteworthy awards presented to some of our members in the past several months. **Ted Goldthorpe**, W4VHF, received Award Number 10 in the 6 meter Worked All Zones category.

Roy Lincoln, WA4DOU, reports receiving certificate #261 for WAZ endorsed for all CW. Keep up the good work, gents.

Spratly and Scarborough Shoal Heats Up

The Washington Times reported in a July 2-8, 2001 edition that there are continuing high tensions between China and the Philippines manifested by stepped up naval activity at these disputed island/shoals in the South China Sea. Despite assurances provided by Beijing that its vessels would stay away from the area, intelligence reports disclosed some 12 Chinese vessels were in the area.

At Scarborough Shoal, there is some speculation that China may be preparing to build a permanent military site similar to structures built on Mischief Reef, farther south. A similar pattern used to occupy Mischief Reef has been noted at Scarborough. First, fishing vessels are sent to the area, followed by naval vessels.

China has already occupied the disputed Spratly Islands which are claimed by the Philippines, China, Vietnam, Malaysia and Brunei. The occupation appears to be part of Beijing's strategy of expanding sovereignty claims farther from its coasts as part of what U.S. military officials have said is an "island chain" strategy.

Last year, a Chinese fisherman was fatally shot during a confrontation with the Philippines military. An Asian diplomat said the Chinese military's South China Sea forces have a reputation for being among the most aggressive of China's military forces and are pushing to expand Chinese power in the region. Stay tuned.

Reflections II - A Book Review

A Book by Walter Maxwell, W2DU

Bill Parris, AA4R, turned me on to a neat little monograph called WireBook III, published by Press Jones, N8UG, "The Wireman". At \$3.00 it is a treasure of facts and ideas about transmission lines, baluns, connectors and the like, but that's not the purpose of this article. In Wirebook III, N8UG provides great praise for Walter

Maxwell, W2DU, and his book Reflections published by the American Radio Relay League. I found this book to be out of print, but a new, revised version, published by WorldRadio Books and available from ARRL under the title of Reflections II, is now available.

I have scanned several chapters of the book. I find Walt Maxwell provides one of the clearer explanation of the phenomenon of reflections in transmission lines that I have ever seen. Walt was the designer of specialized antennae on many of our space vehicles in the 1960's to 1980's and "knows his stuff".

Ever wonder just what you were doing when "tuning" your vacuum tube finals or your antenna coupler? Well, wonder no more. Hint: In either case, you are making the rig/tuner produce the complex conjugate impedance to whatever you'd see "looking into" the antenna from the viewpoint of the transmitter. Walt shows you in clear text how that happens. You may recall in one of our "Adventures of Millie and Mike" in last year's Pileup, that our fearless twosome found maximum power is delivered to a load if the load resistance is equal to the internal resistance of the source. This is the same thing, except it considers complex impedances. Thus if your antenna at some distance down the transmission line shows an impedance of $R_A + jX_A$, then the process of tuning will produce an impedance of $R_A - jX_A$ looking toward the tuner/receiver. This book is must reading for anyone who has wondered about the "black art" of transmission lines. At \$19.95, it is a bargain which will dispel all unrigorous thought about this subject. —*The Editor*

Roving Reporter visits Dave Kennedy, N4SU

After your editor received the nice "strokes" from Dave Kennedy in his letter shown on Page 3 of this issue, it seemed imperative to learn more about him. This, too, after Steve Reichlyn, AA4V, reported that Dave was one of the top 160 meter operators anywhere. A few email exchanges quickly showed me Dave's reluctance to be the main attraction. Yet, he was quite proud of the contribution his wife, Sonja, made in writing about life with Dave in the April, 1963 issue of QST. Somehow, I think Dave was telling me that Sonja had told it all well, and things have never changed!! Therefore, this month, in Sonja's own words, she will let us know what life with

(Continued on page 7)

(Continued from page 6)

Dave is all about. Here's Sonja's "interview":

Just One More Guidebook, Please!

By Sonja Kennedy

It is unheard of to be without a detailed manual for the construction, use and maintenance of any of the gadgets so necessary to smooth operation in the Ham Shack. So, why not offer a guide book for fiancés and wives of hams? A bit of forewarning would be *such* a comfort!

My introduction to ham operations did not seem too frightening, as Dave had just been discharged from the army and was slowly getting a few pieces of equipment lined up for "getting on the air." At least, I was led to believe there would be a few! Little did I know there were stacks of schematic drawings of the dozens of contraptions to come. After a trip or two as a tourist to ham gear shops, I began to view the hobby with a bit of alarm, especially since the boxes of so-called odds and ends were arriving at a wild clip. Had I been forewarned, I might have understood that four years off the air and working for Uncle Sam contributed nothing to the mellowing process in Dave's life as a ham; instead, the return to civilian life intensified the yen for chatting with the thousands of available buddies all over the world. A fine idea, but in the *dining room*? The room was large but, unfortunately, far from soundproof. This would be corrected when we moved to roomier quarters, I hoped.

I must admit I was impressed when notified that the beloved HRO was expected momentarily and must be paid for on delivery, and I must please be on the premises to receive the cherished object, immediately. There must be no return trips for the delivery man as this might cause unnecessary damage to the gadget. It arrived, was duly paid for, and stowed in the dining room. Even though the cost depressed me, I could not help sharing Dave's elation as he was examining each marvelous feature of his new receiver. After this brief excitement wore off, I began to dream of the many things we could have purchased with the four hundred dollars that were sitting on the table in the dining room, making all sorts of shrill noises, not in the least intelligible to me. I know now, that first a ham gadget and then a home gadget is apt to be the pattern of things, or perhaps a year of ham gadgets and then a year of home gadgets. A rather slow process, at times, but over the years the balance has worked out well.

After four months of the ham rig in the dining room, we were transferred to Indianapolis and Dave found a marvelous ham site with a fairly miserable house as an extra. A whole acre of flat, flat ground with only a few distant utility poles to obstruct the view, mighty barren, but perfect for the five 50-foot telephone poles which were soon delivered and planted in strategic spots around the acre. Also, thank goodness, a room for the rig, cold in winter and warm in summer, but at least all by itself. There was a mad scrambling to get the pole holes dug in time for the character who was to come with a winch truck to help in the final setting. No rest for anyone until all poles were set and guyed against the prairie winds.

As fall approached and as the wires were stretched from one pole to another and back again, I began to hear rumblings of a "Sweepstakes Contest". This proved to be an all-new phase of our lives. A wild bit of testing and tuning seemed to be the first step in "Operation Sweepstakes", then a detailed preparation of pages for records of contacts to be made during the contest. At this point I discovered that in the Sweepstakes each operator is concerned with contacting as many other operators in as many different call areas as possible, within the allotted time. On the surface, this may sound sensible. Well, it isn't. Forty-eight hours of almost continual operating created a zombie-like creature from the mild-mannered man I married. The first evening of the first contest, I offered to keep the log as Dave rattled off contacts. After a few hours of this frenzied occupation I could see I was causing more trouble than I was worth; Dave felt obliged to check all the notations made by such a greenhorn secretary. Also, I was exhausted! The Sweepstakes contest has helped me realize it is much better to just arrange flexible and frequent meal hours in order that the head operator will at least have the opportunity to consume enough food to maintain a subsistence level. After all, in forty-eight hours, one is not apt to sink too far into a state of malnutrition! (Here, after a bit of editing, I've been asked to mention that Dave is no longer an active Sweepstakes man!)

(Sound familiar? Does Sonja capture the essence of living with a ham? The conclusion of her essay will appear in next month's Pileup. —The Editor.)

The Back Page

Make sure Saturday, October 20 is on your calendar for the annual CDXA **Barbeque**. As usual, this will be a catered affair. The allocated per person price will depend on the number of people attending. In past years, the price has been about \$14 per person (including meals, drinks, table rentals and clean up). The event will be held at Frank Dowd's spread. Please let Jack Guion know if you are planning on attending so we can develop firm pricing. More to follow in next month's Pileup.

Contest Summary. The fall contest season is rapidly approaching. If you've got work to do on your station in anticipation of entering the contests, now is the time to get busy. Upcoming contests are as follows:

<u>Dates</u>	<u>Contest</u>	<u>Notes</u>
Sept. 29-30	CQ WW RTTY Contest	September, 2001 CQ Page 83 *
October 27-28	CQ WW SSB Contest	September, 2001, CQ Page 83

* Please note: QST lists the CQ WW RTTY contest date as being September 22-23. That is INCORRECT. The September 29-30 date is what is listed on CQ Magazine's web page.

Ken Cannaday, W4NZC
1929 Ewing Avenue
Charlotte, NC 28203

w4nzc@att.net

First Class Mail

See something wrong with your address label? Notify W4NZC at once, please.